SAFETY ALERT

Safety Alert Notification: OH-58D

The United States Army Safety Center accident analysis indicates a significant increase in OH-58D Kiowa Warrior Class A-C accidents throughout the fleet from FY 99 to present. Fortunately, none of these recent accidents have resulted in a fatality, but aircraft have been destroyed and personnel injured. For this FY, OH-58D Kiowa Warrior Class A accident rates are more than five times greater than for other aircraft. This trend points to a combination of material and human factors.

Accident/Incident Summaries from FY 01:

An OH-58D(I) at 1300 feet MSL experienced an engine surge followed by an engine failure. Analysis indicated the fuel boost pump arm of the inlet valve stem was bent and the boost pump was missing an umbrella check valve. TM states that if the umbrella valve is not installed, the engine may flame out when fuel is below the top of the canister and the fuel boost pump becomes inoperative.

An OH-58D(I) experienced uncommanded power loss at 150 AGL feet during recon mission. Rotor and engine drooped and aircraft crashed into trees. Suspected ESC anomaly caused power loss/droop. The aircraft had a history of “unable to duplicate” engine anomalies.

As an MTP was returning from a test flight in an OH-58D(R), low rotor audio activated, and LOW ROTOR warning displayed on the MFD. Rotor RPM drooped to 94% NR. The engine recovered and the MTP landed safely. Determined that low rotor RPM resulted from the “already suspect HMU.”

OH-58D(R) experienced engine-out cockpit indication, after which the aircraft descended to the ground. Post-crash fire destroyed the aircraft.

During an OH-58D(R) qualification training flight, during FADEC manual operations, the rated student pilot allowed the rotor RPM to decay below 95% and the aircraft began a rapid descent. The IP took the controls but was unable to arrest the descent prior to ground impact.

In response to this trend, the leadership of the Army called the Army Safety Action Team to convene at Redstone Arsenal on 10 September. As a result of this meeting, an action team has been formed to conduct a detailed analysis of the causal factors and identify interim and long-term control measures to reverse the direction the OH-58D fleet has been headed. Until the action team can develop a long-term plan, it is essential that commanders take appropriate risk management steps based on the additional information provided.

Recommend that commanders review their safety, maintenance, and training programs in light of this information. Commanders must look closely at their risk management procedures based on these accidents and adjust their risk management decisions. I further recommend that commanders limit FADEC analog manual throttle training to in-ground-effect demonstrations over hard surfaces and on improved airfields.

Maintenance practices: Accidents in the last three years indicate incomplete maintenance practices as a major contributing factor. This included “could not duplicate” write-ups and incomplete troubleshooting procedures. Commanders should ensure that by-the-book troubleshooting and maintenance procedures are conducted and supervised by the chain of command. Special emphasis should be placed on identification and maintenance management of individual aircraft with a history of unexplained and “unable to duplicate” engine anomalies.

Flight profiles and envelopes- a significant number of accidents during the last three years have involved individual training flights with an IP on board. The specific maneuvers involved include simulated engine failures and analog/FADEC manual throttle operations. Tactical flight profiles where power and control margins are nominal (NOE/OGE/Gunnery) and profiles that require flight close to obstacles are major contributors to the human factors portion of the accidents. Missions that include individual qualification/evaluation that require simulated engine failure or manual throttle operations should be considered high risk. Additionally, tactical flight requiring high power settings and limited margin from obstacles should be avoided as much as possible.

The capabilities of the OH-58D Kiowa Warrior and its mission place the aircraft and crew in a position that creates very limited margins for error. Commanders must use every tool available to mitigate risk. Commanders must ensure that the aircraft and crew are capable of performing the mission prior to accepting it. Higher-level commanders must be willing to support those decisions.

The Action Team will provide an initial report to the Army Safety Action Team in two weeks. As the long-term plan is developed and approved it will be communicated to the field as soon as practicable.

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